

REMARKS

Claims 1-22 are currently pending. By this Amendment, claims 21 and 22 have been amended.

Applicants note with appreciation the Examiner's indication on page 2 of the final Office Action that claims 1-20 are allowed. Claims 21 and 22 are amended to similarly recite a stationary infrared sensor. Accordingly, Applicants respectfully submit that the application is now in condition for allowance.

In numbered paragraph 6, page 3 of the final Office Action, independent claims 21 and 22 are rejected as allegedly being unpatentable over U.S. Patent 6,208,765 (Bergen) in view of U.S. Patent 6,438,275 (Martins et al.). This rejection is respectfully traversed.

Applicants have disclosed methods and systems for processing imagery and enhancing visual images. Imagery can be captured using an image capture device, including, for example, thermal, radar imaging and/or infrared sensors (e.g., paragraph 0022). In one example, an improved night image resulting from an exemplary extended range image processing from a stationary position is demonstrated using an exemplary mid-wavelength infrared (MWIR) staring imagery (paragraph 0053). However, the image capture device can encompass a wide variety of other devices, including, a CCD camera, FLIR, a vidicon camera, a Low Light Level camera, a laser illuminated camera, or any other EO sensor capable of collecting image data (e.g., paragraph 0052).

The disclosed methods and systems can process successive image frames (e.g., paragraph 0006) obtained from an image capture device 118 (e.g., paragraph 0012) disposed in a remote or stationary location (e.g., paragraphs 0005 and 0053)

to generate input data (e.g., paragraph 0006). By correlating, spatially oversampling and registering frames (e.g., paragraphs 0031, 0045, and 0048) from a given image capture device 118, resolution is enhanced and temporal and spatial noise reductions are achieved to yield enhanced image output for the given image capture device (e.g., paragraph 0053).

The foregoing features are broadly encompassed by Claims 21 and 22. For example, claims 21 and 22 recite spatially oversampling at least a portion of aligned second frame of image data by a factor greater than one, integrating the spatially oversampled portion of the aligned second frame of image data with image data of a template frame, and processing frames of data into a continuous video stream, wherein the first and second frames of image data are based on an input data from a stationary infrared sensor.

The Bergen patent discloses a method and apparatus for improving the quality of digital images wherein each of the images is produced with a different perspective. The Bergen patent takes images sampled at different locations to combine images (col. 3, lines 2-9). However, the Bergen patent does not teach or suggest a method and system for enhancing visual images, including selecting a first frame of image data as a template frame; capturing a second frame of image data, wherein the first and second frames of image data are based on an input data from a stationary infrared sensor, as recited in claims 21 and 22.

The Martins et al. patent does not cure the deficiencies of the Bergen patent. The Martins et al. patent relates to temporal interpolation, and was applied for the disclosure of improving the quality of a video stream by varying the resolution of each frame of a video stream (col. 1, lines 29-30). However, the Martins et al.

disclosure does not relate to spatial oversampling using motion to average fixed pattern noise. The Martins et al. patent does not teach or suggest a method and system for enhancing visual images, including selecting a first frame of image data as a template frame; capturing a second frame of image data, and spatially oversampling at least a portion of an aligned second frame of image data by a factor greater than one, wherein the first and second frames of image data are based on an input data from a stationary infrared sensor, as recited in claims 21 and 22.

As such, Applicants' independent claims 21 and 22 are allowable. As such, the present application is considered in condition for allowance.

All objections and rejections raised in the Office Action having been addressed, it is respectfully submitted that the application is in condition for allowance and a Notice of Allowance is respectfully solicited.

Respectfully submitted,

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